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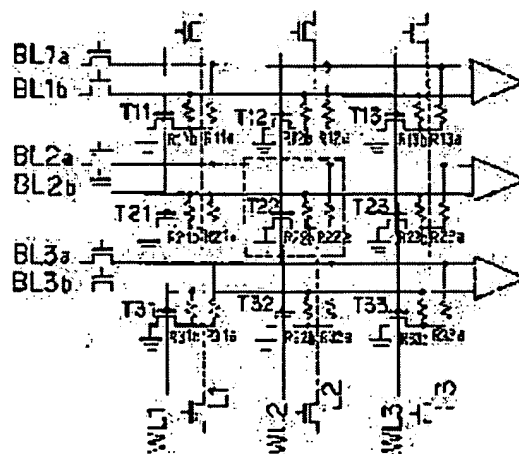
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(54) FERROMAGNETIC NON-VOLATILE STORAGE ELEMENT, ITS INFORMATION REPRODUCING METHOD, MEMORY CHIP USING IT, AND PORTABLE INFORMATION PROCESSING DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a ferromagnetic non-volatile storage element in which cell area can be reduced, storage information can be detected at high speed and accurately even if a magnetic resistance variation rate is small, and can be integrated in high density.

SOLUTION: A unit cell constituting a memory of one bit is constituted of two magnetic resistance elements R22a, R22b magnetized so that respective direction of magnetization is reverse direction, and one semiconductor switch element T22 for selecting these magnetic resistance elements. In the semiconductor switch element, a drain terminal is connected commonly to one side of terminals of the magnetic resistance elements R22a, R22b, a source terminal is connected to ground, and a gate terminal is connected to a word line WL2. Other terminals of the magnetic resistance elements R22a, R22b are connected to bit lines BL1a, BL1b respectively.



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